6184-011

Work Order ID 120220

Wednesday, June 04, 2014 2:59:11 PM

120220

Item ID: D4909-1TRN **Accept** *N900040100* **Setup Start** *NS1*

Revision ID: **Stop** *NS2*

Item Name: Support

Start Date: 6/04/14 **Start Qty:** 2.00 *2*

Required Date: 6/04/14 **Req'd Qty:** 2.00 *2*

Reference:

Cust Item ID:

Customer:

Approvals: **Process Plan:** MLJ **Date:** 14-06-05 **Tooling:** _____ **Date:** _____ **Run Start** *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____ **Stop** *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr / **Revision Nbr**									
D4909 / A									
100		0.00							DAS 40 9-89
100	MORI SEIKI CNC LATHE LARGE					2	0		14/07/13
Doosan	**Memo**	0.00							
Doosan Lathe	Turn blank as per Folio FB189								
110	QC2- Inspect parts off machine FAI/FAIB	0.00							DAS 40 9-89
110						2	0		14/07/13
QC	**Memo**	0.00							
Quality Control									
120	QC8- Inspect parts - second check	0.00							DAS 08 9-89
120			D.a 14/07/14			2	ø		
QC	**Memo**	0.00							
Quality Control									

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

Item ID: D4909-1TRN
Revision ID:
Item Name: Support

Accept *N900040100*

Setup Start *NS1*
Stop *NS2*

Start Date: 6/04/14 **Start Qty:** 2.00 *2*
Required Date: 6/04/14 **Req'd Qty:** 2.00 *2*
Reference:

Cust Item ID:
Customer:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____
QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Run Start *NR1*
Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							DAS 08 9-89
130	Packaging		D.a 14/07/14			2	0		
Packaging	**Memo**	0.00							
Packaging	Identify and Stock in Kanban Location: MAT 060								
140	QC21- Final Inspection - Work Order Release	0.00							
140						~MLJ 14-07-16			
QC	**Memo**	0.00							
Quality Control									

7-7-14

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

Picklist Print

Wednesday, June 04, 2014 2:59:10 PM

Work Order ID: 120220 *120220*

Parent Item: D4909-1TRN *D4909-1TRN*

Parent Item Name: Support

Start Date: 6/04/14 **Required Date:** 6/04/14

Start Qty: 2.00 **Required Qty:** 2.00

Comments: IPP REV:A NEW ISSUE 13-04-24 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6104-011		Manufactured	No			100	Each	12.0000	1	2			DAS 40 9-89
D6104-011									**			14/07/13	
17-4 SS Roundbar 6.50"OD													

Location	Loc Qty	Loc Code	
MAT043	12		
106719	6		
→ 110138	6		2

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: Date: Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐ Crosstube ☐ Water Jet ☐ Engineering ☐
Machining ☐ Small Fab ☐ Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐ Finishing ☐ Rec/Store/Packaging ☐ Other ☐
Large Fab ☐ Composite ☐ Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function
☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence
☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge
☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled
☐ Other

DART AEROSPACE LTD	Work Order:	120220
Description:	Part Number:	D4909-1
Inspection Dwg: D4909 Rev: A		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
.160	±.010	.159	✓		VERN	PHD-12
.100	±.010	.099	✓		"	"
.100	±.010	.100	✓		"	"
.728	±.010	.727	✓		"	"
3.728	+.010 -.000	3.279	✓		"	"
1.260	±.010	1.253	✓		"	"
4.000	±.010	3.994	✓		"	CNC-02
1.370	±.010	1.370	✓		"	"
Ø.65	±.100	6.495	✓		"	CNC-02

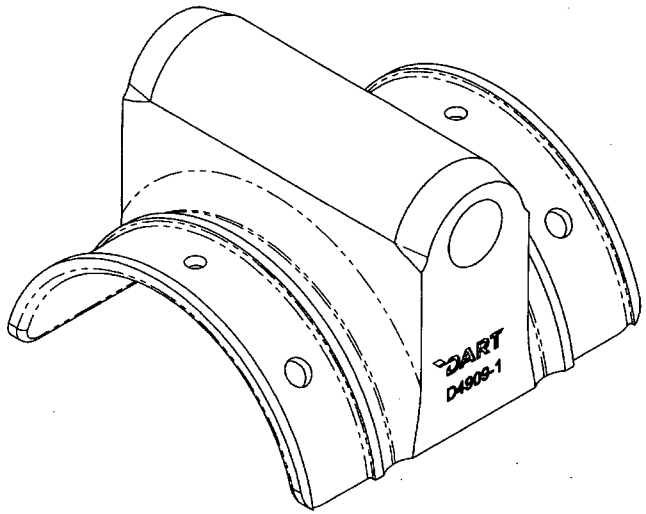
Measured by:	DAS 40 9-89
Date:	14/07/13

Audited by:	DAS 08 9-09
Date:	14/07/14

Preliminary Approval:	
Date:	

Rev	Date	Change	Revised by	Approved
E	10.04.14	Added preliminary approval	KJ	

10.04.15



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 170220 MLJ
14-06-05

RELEASED
2013 -08- 06

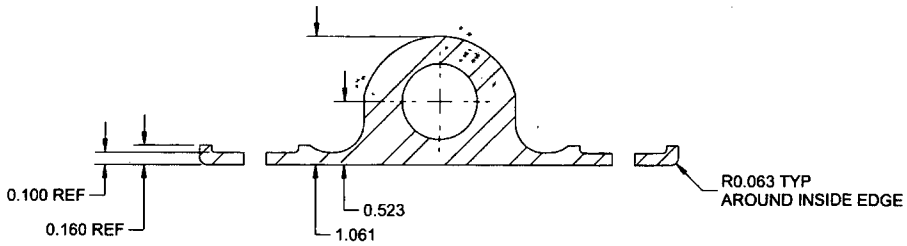
D4909-1 SUPPORT

NOTES:
1) MATERIAL: MAKE FROM D4909-1TRN
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART LOGO AND P/N "D4909-1" IN INDICATED AREA
USING 0.125 HIGH X 0.010-0.020 DEEP LETTERING PER DART QSI 044 6.3,
IDENTIFY WITH DART B/N PER DART QSI 044 6.1
7) WEIGHT: 1.90 lbs

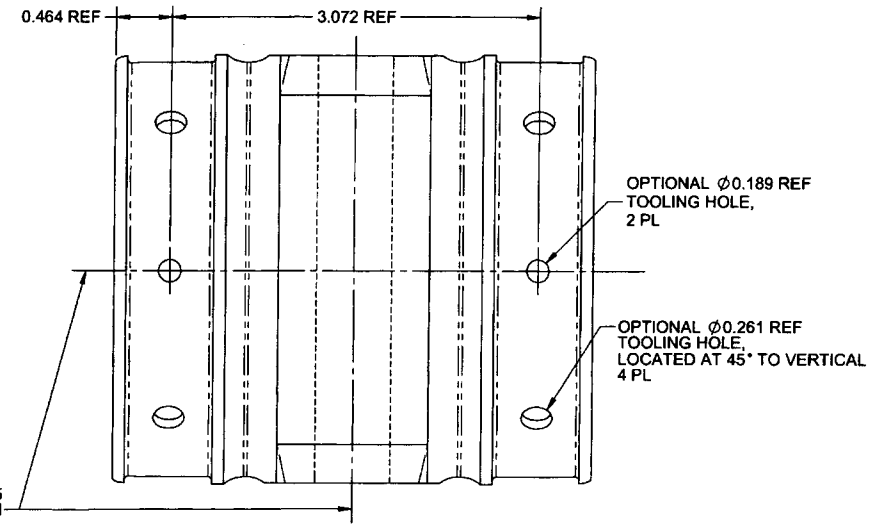
REV.	DESCRIPTION	BY	DATE
A	NEW ISSUE	CP	13.04.08

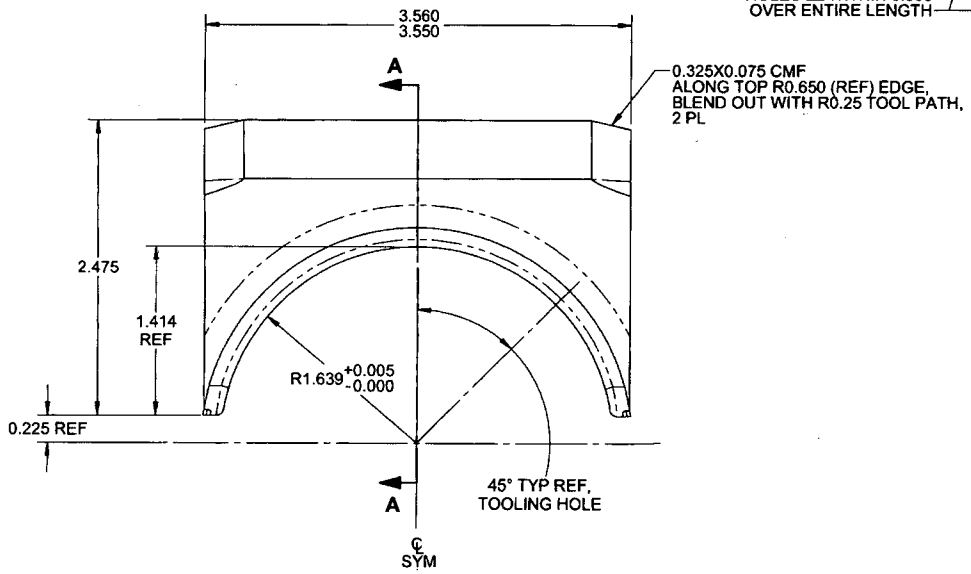
DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED	AR	DRAWING NO. D4909	REV. A
MFG. APPR.			SHEET 1 OF 3
APPROVED		TITLE SUPPORT	SCALE NTS
DE APPR.			
DATE	13.04.08		

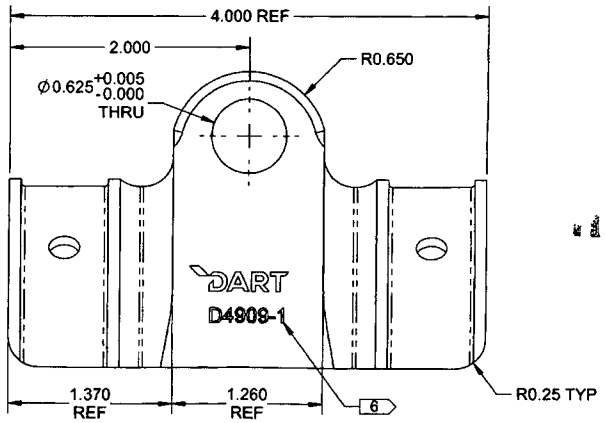
COPYRIGHT © 2013 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



SECTION A-A
SCALE 1X





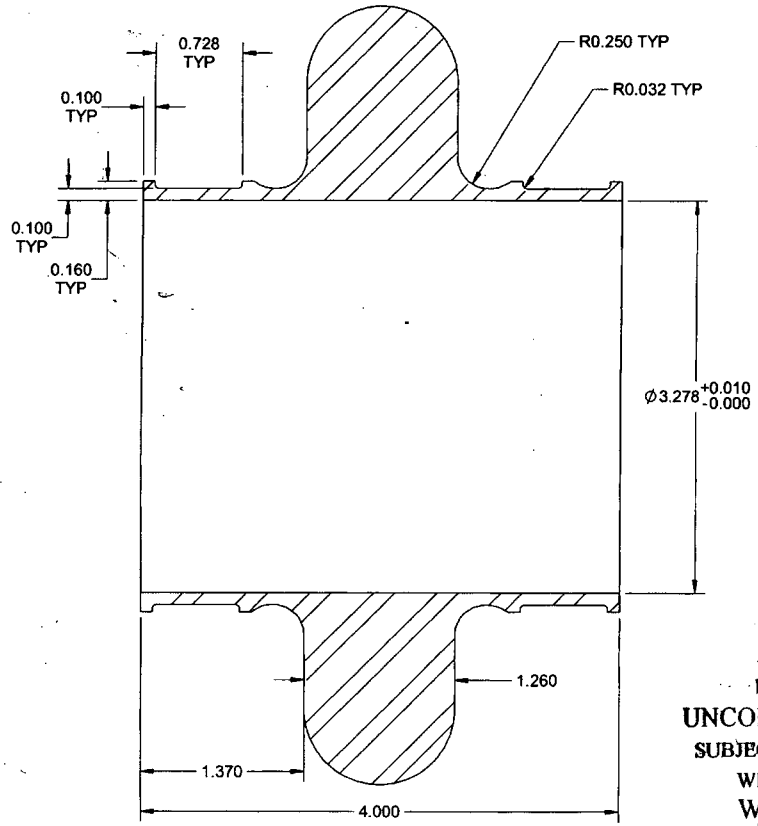


D4909-1 SUPPORT

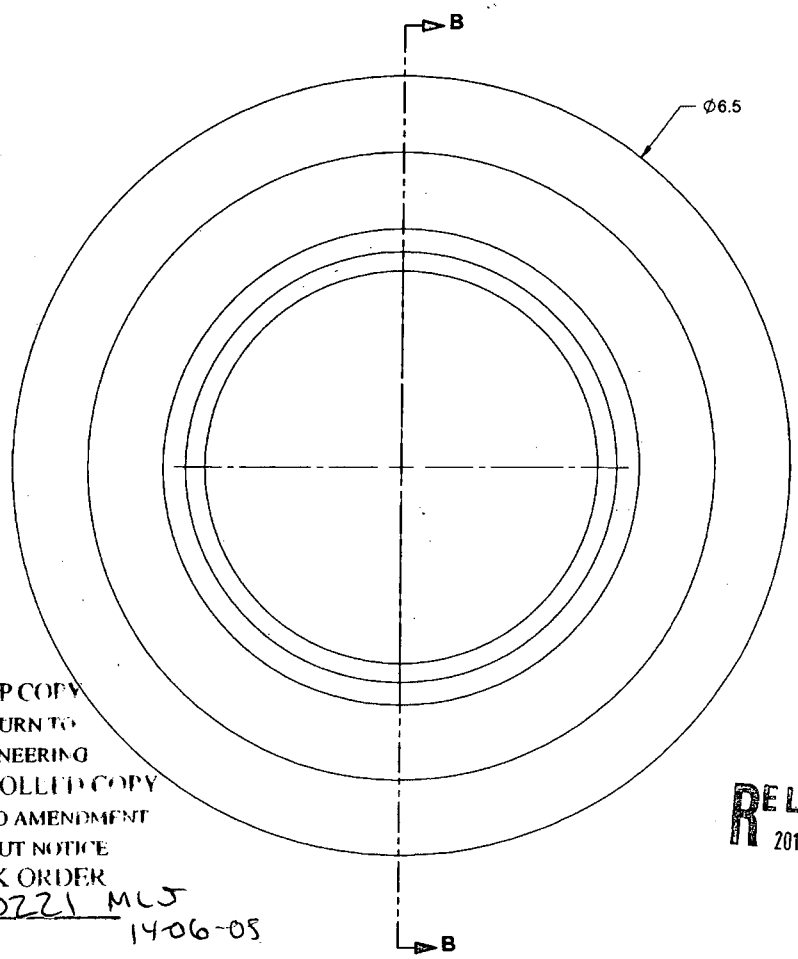
RELEASED
2013 -08- 06

DESIGN		**DART AEROSPACE LTD**	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO. D4909	REV. A
MFG. APPR.			SHEET 2 OF 3
APPROVED		TITLE SUPPORT	SCALE NTS
DE APPR.			
DATE 13.04.08			

COPYRIGHT © 2013 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD



SECTION B-B



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 120221 MLJ
1406-05

RELEASED
2013 -08- 06

D4909-1TRN TURNING DETAIL

NOTES:
1) MATERIAL: 17-4PH / S17400 / TYPE 630 ROUND BAR PER AMS 5643 / ASTM A564, REF DART SPEC. M17-4-R
HEAT TREAT TO H900 CONDITION (900 °F FOR 1 HR, AIR COOL)
MIN UTS = 170 KSI (38 HRc)
2) FINISH: NONE
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: NONE
7) WEIGHT: 9.1 lbs

DESIGN		**DART AEROSPACE LTD**
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D4909 — REV. A — SHEET 3 OF 3
MFG. APPR.		TITLE: SUPPORT — SCALE: NTS
APPROVED		
DE APPR.		
DATE	13.04.08	

COPYRIGHT © 2013 BY DART AEROSPACE LTD
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.